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Forest Service RO

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Date:

Subject: Review of Mt. Pinos RD 5-Year Dwarf Mistletoe Plan (Report No. R91-14)

To: Forest Supervisor, Los Padres National Forest

On October 24-25, 1990, Melissa Marosy, Plant Pathologist on our staff, met with David Schreiner, Forest Silviculturist, Los Padres National Forest, and John Kelly, Timber/Human Resources Staff Officer for the Mt. Pinos Ranger District, to discuss the District's 5-year plan for suppression of dwarf mistletoe in Jeffrey pine. On October 24 they were joined by Joe Krueger, Forester. During the two days they visited El Camino Pines Organized Group Campground, McGill, Chula Vista, and Mt. Pinos developed campgrounds on Mt. Pinos, Mil Potrero Park, and Alamo Mountain, areas for which biological evaluations were previously completed by the RO Forest Pest Management group. Suppression projects in these areas are in various stages of completion. They visited one additional site, Pine Mountain Club, which the District is considering for dwarf mistletoe suppression. They discussed possible changes to the 5-year plan submitted by the District in September 1989, in light of Forest and District priorities and emphasis areas. The following summarizes this trip and my resultant recommendations.

On Wednesday morning Melissa was briefed by John Kelly as to the District's current priorities and emphasis areas. In 1988 recreation was named as the theme for the District. Three emphasis areas--winter sports, OHV management, and timber management--were identified. These three emphasis areas will be reviewed and reconsidered in January 1991.

The direction of timber management is to be an example of New Perspectives. The program is to involve (1) maintaining healthy stands of conifers for aesthetics and recreational values, and (2) providing community/public benefits. John Kelly is dedicated to following this direction, both by managing for uneven-aged class distributions and by maintaining an active community involvement program.

Mt. Pinos, the most heavily used area on the District, has been identified as a geographic emphasis area. The top of the mountain, from 8500 feet up, was designated in the Forest Plan as a botanical study area for the subalpine forest ecosystem. There is also a Research Natural Area on the mountain, with two additional RNAs under study. A wilderness area is expected to be designated within the next year. Other areas on the mountain are managed for developed and dispersed recreation, visuals, and wildlife.

Organized Group Campgrounds--Mt. Pinos

A biological evaluation of the El Camino Pines and St. Nicholas Organized Group Campgrounds was conducted in May 1988. Dwarf mistletoe was identified as a serious problem in the campgrounds, and means of controlling the problem were presented. Based on these recommendations, the District in 1990 conducted a pre-suppression survey of a number of OGC's in the vicinity of El Camino Pines, covering an area of approximately 50 acres.

The group walked through part of the survey area and reviewed the data collected. The survey consisted of three lines, with 1/5-acre plots established at 3- to 4-chain intervals along each line. Individual trees within the plots were not tagged, but plot centers will be marked so that the plots can be relocated after treatment.

Average dwarf mistletoe ratings (DMRs) in the area were 3 (moderate infection); however, DMRs were higher in areas with greater basal area. Some mistletoe control was done in the area in 1963, as evidenced by control boundary tags located on some of the trees in the area. The District plans to incorporate dwarf mistletoe control into an overall pest management plan for the area, in cooperation with Camp personnel. An integrated approach to control is planned, including tree removal, pruning, and alternate species. A tree spade is available to transplant sapling-sized trees. Non-host species being considered include black oak, live oak, pinyon pine, white fir, and big-cone Douglas-fir.

Other problems in the area include annosus root disease, Armillaria root disease, white fir true mistletoe, and bark beetles. A question arose as to the recommended treatment of enlarging annosus centers.

Developed Campgrounds--Mt. Pinos

Two campgrounds on Mt. Pinos--Mt. Pinos Campground and McGill Campground--were found to have dwarf mistletoe infections during a biological evaluation conducted in August 1977. Control options were presented in a report of this evaluation dated January 1978. The District had proposed in their five-year dwarf mistletoe plan to conduct a pre-suppression survey of these and one additional Mt. Pinos campground, encompassing 100 acres, in FY 1992.

McGill Campground is the largest developed campground on the forest. Levels of infection within the campground proper are low. Pruning scars, evidence of previous control efforts conducted in the 1960s, are evident. Healthy giant sequoia, planted in the 1970s in openings probably created by previous vegetation management efforts, are present. Sugar pine and black oak are other species which occur in the area and are under consideration for replanting.

Dense thickets of Jeffrey pine on the outskirts of the campground, where no prior treatment was done, are much more severely infected. One of these thickets occurs along a newly constructed handicapped interpretive trail. The District would like to leave this thicket untreated as a contrast to the healthy vegetation within the campground proper.

Chula Vista Campground is a walk-in campground near the Mt. Pinos parking lot. The area has signs of previous pruning, although it is not certain whether the treatment was for mistletoe, hazard concerns, or both. No mistletoe was evident during our brief walk through the area.

Mt. Pinos Campground also exhibits signs of previous pruning. Many of the larger trees have massive brooms which could have been due to mistletoe infection. However, we saw no current mistletoe infections. Some white fir is present in the campground, and could be planted as a non-host species if necessary.

Mil Potrero Park and Pine Mountain Club

Biological evaluations of Mil Potrero were conducted by Forest Pest Management in 1978 and 1984. Annosus centers and an area of dwarf mistletoe infestation were delineated during the 1984 evaluation. The District is planning a salvage operation for this area to remove trees killed by the flat-headed borer, Melanophila californica. As part of that operation, any trees with a DMR of 5 or 6 will be removed, and any trees with less infection which can be hand-pruned will be pruned. The question was posed as to possible ramifications for future pest problems if flat-headed borer-killed trees are felled and left in place, and if there is a preferred time of year to do this. It was also wondered if big-cone Douglas-fir could be replanted into openings created by annosus root disease in Jeffrey pine.

The District is considering combining the treatment at Mil Potrero with treatment at Pine Mountain Club (PMC), a tract of private land within the National Forest. The District would like to work with the Homeowner's Association at PMC, perhaps encouraging them to hire a private consultant to coordinate efforts with the FS. This would provide an opportunity to incorporate human resources and community involvement into this vegetation management project. The 5-year dwarf mistletoe suppression plan calls for a survey of this area in FY 1991.

The land bordering on the PMC tract has no signs of previous pruning. Dwarf mistletoe is heavy on some trees. Much of the overstory is overstocked and would benefit from thinning. There is no general public access to the site, other than through the residential tract. Treatment of this area could be affected by the anticipated wilderness designation.

Alamo Mountain

The management emphases for Alamo Mountain, aside from maintaining healthy and vigorous stands, are general recreation, visuals, and wildlife. Major uses include day use OHV, hunting, and camping. The area in question is a rectangular area at the peak of the mountain, bordered by a road at 6500-7000 feet. The treatment area would include some of the area outside the boundary of the road, for a total of about 2500 acres. A biological evaluation of the area was conducted in 1985, and a variable plot cruise survey conducted in

1987. Plans for an environmental assessment for the project are under way; completion of the EA is anticipated in late 1991.

The dominant species in the treatment area is Jeffrey pine. Ponderosa pine also occurs locally, as do sugar pine and white fir. Pinyon pine and black oak are present in the understory. The survey revealed areas of light, moderate, and heavy dwarf mistletoe infection. The southwest portion of the treatment area in particular is very heavily infected. Both overstory and understory trees are infected. The upper crowns of most of the overstory trees, however, are free of mistletoe, and the trees appear vigorous.

Forest and District direction dictates that this area be managed under uneven-aged management. Thus, treatment currently planned for the area includes large group selection, buffer strips, and the use of non-host species.

Summary and Recommendations

The District appears to be on the right track in terms of its long-range dwarf mistletoe suppression program. Two areas have been surveyed, and planned treatments are in keeping with those outlined in previous FPM biological evaluations. In light of the information gained during Melissa's trip, however, I would recommend a reevaluation of project priorities as reflected in the 5-year plan.

I would recommend continuing with the environmental assessment and treatment of the organized group campgrounds as planned. Along with the treatment for mistletoe, treatment to halt the continuing enlargement of one or more active annosus centers could be attempted. The best way to successfully stop the enlargement of these centers is to create a buffer strip, void of susceptible host species, around the center. Since the pathogen can spread through root contact, all trees which could potentially be in root contact with currently infected trees on the edge of the center must be removed. The opening could then be replanted to non-host species. A certain amount of root excavation may be necessary to determine the extent of root grafting on the edge of the center, which will determine the width of buffer strip necessary.

I would recommend survey and treatment of the Mt. Pinos developed campgrounds in FY 1991 and 1992. These campgrounds, with little to no dwarf mistletoe infection, could be sanitized with minimum cost and a high probability of success. Complete surveys of all three campgrounds should be conducted to verify the presence or absence of the parasite. The portion of McGill Campground along the interpretive trail to remain untreated provides an excellent opportunity to show the public the effects of sound forest management to control forest pests. I would recommend including an interpretive sign to contrast the health of the untreated stand to that of the treated trees within the campground proper. Forest Pest Management can help with the wording of such a sign, if needed.

In addition, treatment of dwarf mistletoe on Alamo Mountain should be given high priority. Many of the trees in this area are severely infested, and are thus more susceptible to other stress factors such as drought and insect attack. In the most heavily infested areas of the mountain top, pruning currently remains a viable treatment option. However, any delay in treatment may result in loss of this option. Stressed trees with mistletoe in the top third of the crown would not be expected to survive pruning. Additional years of stress, coupled with vertical movement of the mistletoe within the crowns, could soon necessitate treatment by tree removal. Such treatment would be inconsistent with management objectives for this area.

Dwarf mistletoe in timber stands has traditionally been controlled by clearcutting the affected area and replanting, in an effort to eradicate the parasite. In developed campgrounds, measures to increase vigor of the standing trees and save as many trees as possible are favored over measures necessary to fully eradicate the parasite. The uses and characteristics of Alamo Mountain lie somewhere between a timber stand and a developed recreation site. To complicate the situation, the District is committed to managing the area under uneven-aged management.

The District is well aware that to do nothing in this area would lead to further mistletoe infection, increased mortality, and increased fire hazard, and thus is committed to active management of the resource. This situation provides a challenging opportunity for the District to demonstrate the feasibility of current recommendations for economically managing dwarf mistletoe under uneven-aged management. In light of the Region's Environmental Agenda, a demonstration project of this nature would be quite timely. A number of treatment methods, implemented separately and together, could be attempted. Methods could include single and group tree removal, branch pruning, buffer strips, species manipulation, and use of resistant Jeffrey pine planting stock, among others. The District might want to initiate an effort to identify individual Jeffrey pines potentially resistant to the dwarf mistletoe, and replant with stock obtained from these seed trees. Such a project would require a long-term commitment on the part of the District, to ensure that plots are monitored and data collected over a 10- to 20-year period. Forest Pest Management would be willing to work closely with the District to plan and implement such a project.

In light of other priorities and opportunities discussed previously, I would recommend that plans for dwarf mistletoe suppression at Pine Mountain Club be postponed until a later date. If, once the Mt. Pinos and Alamo Mountain projects are well underway, the District feels that treatment of Pine Mountain Club should be considered, I feel that John Kelly has sufficient expertise to perform the necessary biological evaluation of this site. Alternatively, treatment of this area could be combined with other projects, such as that at Mil Potrero, not requiring FPM suppression funding.

Questions raised relative to Mil Potrero related to the felling of flat-headed borer-killed pine and the susceptibility of big-cone Douglas-fir (BCDF) to annosus root disease. There is no reason relative to pest management concerns that the dead trees cannot be felled and left on site. It also should make no

difference at what time of year the felling is done. Big-cone DF is known to be a host of annosus root disease, but little is known about its susceptibility relative to other species. If the District would consider including a small number of BCDF in its planting, additional information could be obtained as to the susceptibility of this species to annosus root disease.

If you have any questions regarding this report, please contact Melissa Marosy at 415-705-2640.

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